

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of the Claims:

1. (Original) An ~~overwound~~ munitions casing incorporating an annulus of a shape memory alloy which has been subjected to a combination of mechanical and thermal treatments and which has a composition such that upon subsequent heating to a predetermined temperature, said annulus will contract radially inwardly and rupture the said munitions casing.

2. (Currently amended) A casing as claimed in claim 1 wherein the annulus is comprised of ~~one~~ of a solid ring of shape memory alloy and a plurality of windings of shape memory alloy in wire form.

3. (Cancelled)

4. (Previously presented) A casing as claimed in claim 1, wherein the shape memory alloy to form the annulus is stretched or expanded at a temperature below the predetermined temperature prior to fitting on the munitions casing.

5. (Previously presented) A casing as claimed in claim 1, wherein the shape memory alloy is selected from Cu-Al-Zn, Cu-Al-Ni, Cu-Ni-Al-Zn-Mn, Cu-Zn-Al-Mn and Ti-Ni alloys.

6. (Previously presented) A casing as claimed in claim 1, wherein a cutting means is located between the annulus and the casing and is arranged, such that in use, the radially inward force exerted by the annulus is concentrated onto a relatively small area of the munitions casing.

7. (Original) A casing as claimed in claim 6, wherein the cutting means may be selected from a spike, blade or sharp edge.

8. (Previously presented) A casing as claimed in claim 6 wherein the cutting means is retained in a retracted position prior to use, such that it is not in direct contact with said casing.

9-10 (Cancelled)

11. (Previously presented) A casing as claimed in claim 4 52, wherein the internal heating heater provides heating is afforded by one of resistive ohmic heating of the annulus, by direct application of a current, and inductive heating.

12. (Previously presented) A casing as claimed in claim 1 wherein the annulus is a wire winding and is wound within a housing which is located around the casing.

13-16 (Cancelled)

17. (Currently amended) A method of ~~rupturing~~ using a munitions case casing as claimed in claim 1 comprising locating ~~at least one~~ the annulus ~~as described in claims 1~~, around the outer surface of a the munitions casing and arranging for an , ~~causing an external or internal heating means heater~~ to be applied to said at least one annulus, wherein ~~the at least one annulus is caused to~~ the internal heater is capable of providing subsequent heating to the predetermined temperature so as to cause the annulus to rupture the munitions casing.

18-36. (Cancelled)

37 (Currently amended) A ~~connector~~ casing as claimed in claim ~~23~~ 1, wherein the shape memory metal alloy has a transition temperature range which lies in the range of 80°C -150°C.

38-49. (Cancelled)

50. (New) A casing as claimed in claim 1, wherein the annulus is comprised of a plurality of windings of shape memory alloy in wire form.

51. (New) A casing as claimed in claim 8 wherein the cutting means is retained in the retracted position by means of a sacrificial spacer, a bias means, sacrificial retaining pins or a shearable adhesive bond.

52. (New) A casing as claimed in claim 1, wherein heating of the annulus is afforded by external heating or an internal heater.

53. (New) A casing as claimed in claim 12 wherein the housing extends wholly or partly around the perimeter of the monition casing.

54. (New) A casing as claimed in either claim 12, wherein the housing is U-shaped or rectangular in cross section.

55. (New) A casing as claimed in claim 54, wherein part of the length of the housing is provided with a flange which extends laterally on each side of the base of the housing.

56. (New) A casing as claimed in claim 12, wherein the walls of the housing are cut to provide reduced flexural stiffness.

57. (New) A casing as claimed in claim 1 which is a casing for a shell, bomb, torpedo, missile or rocket motor.

58. (New) A casing as claimed in claim 57, wherein the munitions casing is an overwound munition.

59. (New) A casing as claimed in claim 1, which forms part of a launch tube assembly.

60. (New) A casing as claimed in claim 57 containing an energetic material.

61. (New) A casing as claimed in claims 60 wherein the energetic material is propellant or high explosive.

62. (New) A method of manufacturing a munitions casing as claimed in claim 1, wherein the annulus of the shape memory alloy is

- i) subjected to a combination of mechanical and thermal treatments and is selected to have a composition such that, when installed around the munitions casing and subjected to subsequent heating to a predetermined temperature, said annulus will contract radially inwardly and rupture the said munitions casing; and
- ii) installing the pretreated annulus of the shape memory alloy around the munitions casing.